

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for production of a recombinant ~~expression product~~ human α_1 -antitrypsin polynucleotide using semi-continuous culture of transgenic ~~plant~~ rice cells comprising a heterologous expression cassette comprising a polynucleotide encoding the ~~expression product~~ human α_1 -antitrypsin polynucleotide operably linked to a RAmy3D promoter ~~induced by sugar depletion~~, the method comprising the ~~step~~ steps of exchanging an induction medium with a growth medium after the induction medium pH increases, and isolating the recombinant expression product from the induction medium, wherein the recombinant expression product is a heterologous protein and the induction medium pH increase correlates with a high level of heterologous protein expression.

2-5. (Cancelled)

6. (Currently amended) The method of claim 5, wherein the human α_1 -antitrypsin gene is optimized for expression in ~~plant~~ rice cells.

7. (Withdrawn) The method of claim 1, further comprising the step of exchanging the medium when the pH is above 6.5.

8. (Withdrawn) The method of claim 7, wherein the step of exchanging the medium is carried out when the pH is above 7.0.

9. (Withdrawn) The method of claim 7, wherein the step of exchanging the medium is carried out by replacing an induction medium with a growth medium.

10. (Withdrawn) The method of claim 1, wherein the plant cell is a rice cell.

11. (Withdrawn) The method of claim 1, further comprising measuring oxygen uptake rate of the plant cells.

12. (Withdrawn) The method of claim 11, further comprising exchanging a growth medium with an induction medium when the oxygen uptake rate is above 2.0 mmol O₂/Lhr.

13. (Withdrawn) The method of claim 12, wherein the step of exchanging the growth medium with the induction medium when the oxygen uptake rate is above 5.0 mmol O₂/Lhr.

14-16. (Cancelled)

17. (Currently amended) The method of claim 1, further comprising measuring oxygen uptake rate of the ~~plant~~ rice cells and replacing the growth medium with the induction medium when the oxygen uptake rate is above 2.0 mmol O₂/Lhr.

18. (Previously presented) The method of claim 1, comprising the step of exchanging the induction medium with a growth medium when the pH of the induction medium is above 5.5.

19. (Previously presented) The method of claim 1, comprising the step of exchanging the induction medium with a growth medium when the pH of the induction medium is above 6.0.

20-25. (Cancelled)